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WINTER 2017 VOLUME 75.4



BLUE JAY



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SCI/TECH



Ron Jensen discusses his experiences with feeding unsalted peanut butter to birds in the winter.



A weekend of beautiful, crisp fall weather was the backdrop to this year's Nature Saskatchewan Fall Meet in Elbow, Saskatchewan. Turn to page 6 to read about the all the activities that took place.



Calcium is recognized as being important to wild birds during the breeding season. While sources of calcium for songbirds are varied, Spencer Sealy shares how an additional source of calcium for birds may be fragments of egg shell extracted from the bottom of nests that survived over winter.



In a new column entitled The Nature Notebook, Jared Clarke — teacher, biologist and host of The Prairie Naturalist — shares his appreciation for, and experiences with, Black-capped Chickadees in the winter.



Recent years have seen the appearance of the Trumpeter Swan as a summer resident in southeast Saskatchewan at the Strawberry Lakes area approximately 60 km east of Regina. This marks a new instance of the re-establishment of a bird, once thought to be highly threatened, in its former range.



The Yellowhead Flyway Birding Trail Association Loon Initiatives Committee (YFBTA LIC) conducted its annual loon survey at Madge Lake over the spring and summer months. See page 22 for the results.

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FROM THE PRESIDENT

Dr. Branimir Gjetvaj
President, Nature Saskatchewan

Call me old-fashioned, but I enjoy experiencing nature unhindered by the distractions of modern lifestyle. I prefer walking through the grass, listening to the birds and breathing the wind fragrant with blooming wolf willow. It upsets me when I see roads and paved trails built through native prairie so that visitors can



ON THE FRONT COVER

"JUNCO KING"

This photo of a Dark-eyed Junco was taken in April by Randy McCulloch at his cabin at Napatak, SK, which is approximately 15 km SE of La Ronge. Ten inches of snow had just blanketed the ground, and for a couple of days, there were hundreds of juncos in the yard gorging on the bird seed at the feeders.
Photo credit: Randy McCulloch



ON THE BACK COVER

For the 30th Anniversary of Nature Saskatchewan's Operation Burrowing Owl program, limited edition merchandise is available for purchase. Turn to page 19 to see the items available and to check out some special holiday pricing!

quickly pass through towards their destination, wherever that might be. It upsets me when I see invitations to attend open-air concerts in our national parks instead of calling people to slow down and listen to a melodic song of a meadowlark. I used to be able to set up my tent on a sheltered piece of prairie in the Rock Creek campground of Grasslands National Park. Now I hear that I will have to use a piece of compacted gravel designed and built for houses on wheels, a few of which have no windows but display a satellite TV dish, presumably to watch nature-related documentaries. We used to be interested in connecting with nature, now we use nature as a place holder.

This fall, I talked to a friend who works as a biologist in a national park that has over one million visitors a year, coming from all over the world. She noticed that participants in her interpretative walks are showing less interest in seeing critters and learning about nature. Instead they come, take a short walk, capture a selfie and continue with their journeys. Nature serves only as a backdrop for posts on social media. How did we come to this, and can we do anything to slow down the trend?


Five hundred years ago in October of 1517, Martin Luther posted his 95 Theses to the door of the Castle Church in Wittenburg. This act of defiance challenged the Catholic Church authorities and started a movement that would become the Protestant Reformation. The Reformatory emphasis on universal literacy led to far-reaching political and socio-economic changes, bringing prosperity to societies that invested in the education of its citizens.



Dr. Branimir Gjetvaj

In his inaugural address to the National Academy of Sciences (USA), Austrian scientist and demographer Wolfgang Lutz¹ argued that the concept of *sola schola et sanitate* (only education and health) should serve as the guiding principle for development and climate change adaptation efforts, echoing Luther's principles of *sola scriptura*, *sola fide*, and *sola gratia* (only scripture, only faith, and only grace). An investment in human capital through enhancing education and health for all members of a society, he suggests, is a key to environmental protection and sustainable future.

Scientific research has shown that spending time in nature benefits human health. A healthy body with an active brain that is trained to structure information in a meaningful way will bring positive changes to individuals and societies. To secure future well-being, we need to change our current behaviour — a change that will come from awareness and motivation for action. The Board of Nature Saskatchewan will soon start working on a new Strategic Plan. Shall we put more effort into developing environmental education programs that enable people to experience nature and be more interested in protecting it?

1. Lutz, W. (2017): Global sustainable development priorities 500 y after Luther: *Sola schola et sanitate*. Proc. Natl. Acad. Sci. USA 114: 6904-6913. 

BLUE JAY

Blue Jay, founded in 1942 by Isabel M. Priestly, is a journal of natural history and conservation for Saskatchewan and adjacent regions. It is published quarterly by Nature Saskatchewan.

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Blue Jay welcomes all submissions, preferably by e-mail (although hand-written or typed manuscripts will be considered to accommodate those who do not have access to computer equipment), polished or in need of some editorial assistance. All items for publication should be sent to the editor electronically (in a Microsoft Word document) by e-mail or on CD. Hard copies and CDs can be mailed to the editor at the address above.

Submission deadlines

January 1 for the Spring issue, April 1 for the Summer issue, July 1 for the Fall issue, and October 1 for the Winter issue. For detailed information, please see the "Guidelines for Authors" under the Publications section of the Nature Saskatchewan website.

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FEEDING PEANUT BUTTER TO BIRDS IN WINTER

Ron Jensen

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Peanut butter as a winter food provides many benefits to the tough little feathered friends who cheer up our winter days.

I had heard about providing peanut butter many years ago on a television program — perhaps from John Acorn or someone like him. However, there was concern that the peanut butter was too rich and caused problems for our winter friends. A case of a chickadee being found egg bound in the spring, i.e. an egg was stuck in the bird's oviduct, was highlighted. The individual speaking about this on the show had applied a warm compress and massaged the vent area. An egg finally came out with a distinct smell of peanut butter. That person had been feeding peanut butter all winter and thus the cautionary note that winter species feeding heavily

on peanut butter could become egg bound along with the benefits.

Now, fast forward to three winters ago — I purchased a jar of salt-free peanut butter, which required a bit of a searching through product aisles of a least two grocery stores. Depending upon your location, some stores offer self-grind unsalted peanuts if you are unable to locate unsalted peanut butter. It is important that unsalted peanut butter be purchased to avoid dehydration of the species feeding on the peanut butter.

I spread the peanut butter generously on the bark of two conifers — in the front yard, visible from the dining room table, and in the backyard, which could be viewed out my wife's home office window. The list of interested birds grew quickly: Downy Woodpeckers, Black-capped Chickadees, Red-breasted and White-breasted Nuthatches, Black-billed Magpies and House Sparrows. The rapid disappearance

of the peanut butter, especially on cold winter days or just before a storm, was amazing. Second and third jars were soon consumed.

In the third winter, I got smarter about where to spread the peanut butter. My wife commented that the peanut butter grease stain on the trees didn't seem to disappear. I had thought it would. My solution was to attach a fine wire to two large wooden shingles, generously spread the peanut butter on to them, and then attach each peanut butter slathered shingle to their respective conifer trees. This worked really well because it eliminated House Sparrows, but the Black-billed Magpies were still able to get at one peanut butter feeder by standing on top of the sunflower seed feeder. The solution was to lower the sunflower seed feeder, putting the peanut buttered shingle out of reach.

Now I was happy providing salt-free peanut butter to four species of winter residents. A fifth surprise species appeared — Brown Creepers that could visit at either feeder. What a treat to see a Brown Creeper at any time, but especially during wintertime when a Brown Creeper is considered an "irregular winter visitor."¹

As last winter's feeding time came to a close, there were pairs of the following: Downy Woodpeckers, Red-breasted and White-breasted Nuthatches, Brown Creepers and several Black-capped Chickadees all looking sleek and healthy, ready for a busy season of rearing young.

¹ A.L. Leighton et al ed. 2002. Birds of the Saskatoon Area. Special Publication No. 5 Manley Callin Series Special Publication No. 23 p.225. 



A Brown Creeper feeds on peanut butter slathered on a wooden shingle. Photo credit: Ron Jensen



On Saturday, September 30, Nature Saskatchewan members took in some hiking on the sand dune trails at Douglas Provincial Park.

A SANDY AUTUMN HIKE AT THE NATURE SASKATCHEWAN FALL MEET

Emily Putz

Habitat Stewardship Coordinator
Nature Saskatchewan

A weekend of beautiful, crisp fall weather was the backdrop to this year's fall member meet in Elbow, SK, which was held from September 29 to October 1. The weekend kicked off with everyone getting together with old friends, as well as hopefully making some new ones, to enjoy viewing other members' photos of this summer. Photo presentations included Donna Bruce encouraging us to explore Big Gully, SK; Bill MacKenzie sharing some great bird shots with us; Morley Maier showing us some truly amazing Barn Swallow shots; Ed Rodger sharing some

wonderful photos from his trip to South America, and myself who gave our members a little update on what the SOS program staff were up to this summer. Members enjoyed this show to the beautiful background view overlooking Lake Diefenbaker through the Elbow Harbour Golf Club and Resort's surround windows — our venue for the weekend.

Saturday dawned nice and early with members loading the bus to head to Douglas Provincial Park's sand dune trails to do some hiking. Here members were treated to finding some of Saskatchewan's rarest plants, including Western Spiderwort and Annual Beaked Skeletonweed. Even though the season has long passed for Western

Spiderwort's peak blooming, everyone wasted no time putting their ID skills to the test and finding quite a few plants. Members also enjoyed hiking out to the unique landscape that is Douglas Park's active dune and saw many tracks within the sand including bobcat, moose, coyote and fox. We were also lucky enough to find some late blooming Prairie Sunflower and Common Skeletonweed — the last of the year!

Saturday afternoon saw us loading the bus after a delicious lunch, prepared by the Harbour Golf Club, and heading to Gardiner Dam — the seventh largest earth-filled dam in the world — for a private tour of the dam's facilities. This was truly

a unique experience as not many members of the public have been treated to seeing the inner workings of the dam. Those that went on this tour went down 50 feet below lake level to the spillway's lower gallery before climbing all the way up to the walkway above the spillway's gates. We continued the tour at one of the dam's five large control structures. Special thanks to Cam Leslie from the Water Security Agency for leading this wonderful tour.

Back at the hall, the Fall Business Meeting started and after some discussion, resolution was passed for the eradication of feral boars escaped or released from game farms. After a short break, the evening started with a delicious banquet meal of roast beef catered by the Elbow Harbour Golf Club. During the banquet, new members were recognized and welcomed and awards were presented to Harold Fisher (Cliff Shaw Award), Rob Wilson (Fellows Award), Brain Jeffery (Volunteer Award), and Dr. Jon and Naomi Gerrard (Conservation Award). The evening concluded with our after-dinner presenter, David Weiman, who spoke on his experiences on his trapping line, humane trapping of fur bearing animals, and what trapping means and its value in the present day. This talk was very interesting and a new topic for many members in the crowd, and was accompanied by a display on the different traps used and pelt examples from many species.

The meet was a great success! Special thanks to our planning committee, our MCs and presenters, tour guides, and the wonderful venue and catering by the Elbow Golf Club. Have a great winter and we hope you'll join us for the 2018 Spring Meet in the Big Muddy! 🦉

CALL FOR APPLICATIONS

for the Margaret Skeel Graduate Student Scholarship

A \$2,000 scholarship will be awarded in 2018 to assist a graduate student attending a post-secondary institution in Saskatchewan.

It will be awarded to a student in the field of ecology, wildlife management, biology, or environmental studies including social science applied to marketing conservation and sustainable use of natural resources.

This scholarship must be applied to tuition and associated costs at the named institution.

The scholarship is awarded to a student pursuing studies in a field that complements the goals of Nature Saskatchewan. Nature Saskatchewan promotes appreciation and understanding of our natural environment, and supports research to protect and conserve natural ecosystems and their biodiversity. We work for sustainable use of Saskatchewan's natural heritage, ensuring survival of all native species and representative natural areas, as well as maintenance of healthy and diverse wildlife populations throughout the province. We aim to educate and to stimulate research to increase knowledge of all aspects

of the natural world. Research that will contribute to resolving current conservation problems has special priority. Contact our office by e-mail at info@naturesask.ca or by phone at (306) 780-9273 or 1-800-667-4668 (toll-free).

Application Guidelines:

- An updated resume with a cover letter
- Letters of Reference are optional
- A full description of your present and/or proposed research
- A transcript of the undergraduate and graduate courses completed so far and those currently enrolled in
- An indication of what other source(s) of funding you hope to rely on to complete your studies

Application Deadline:

February 28, 2018
Please submit your completed application to the Scholarship Committee: info@naturesask.ca or Nature Saskatchewan
206-1860 Lorne Street
Regina, SK S4P 2L7

Winner Announced:

March 31, 2018



David Weiman spoke about his experiences on the trapping line and shared a collection of pelts from many different species.

NATURE SASKATCHEWAN 2017 AWARDS RECIPIENTS

Each year at the Fall Meet, Nature Saskatchewan recognizes outstanding service and contributions that Society members, and/or affiliate and partner organizations, have made toward Nature Saskatchewan's objectives and goals. Below are the award recipients for 2017.

Fellow's Award: ROB WILSON

A retired teacher living in Saltcoats, Rob recently completed a full eight years serving on the board of Nature Saskatchewan. Rob was an active member of the Membership Committee and the Lands Committee and continues to serve as the Lands Committee chair. This is in addition to his ongoing and very active involvement in the Yellowhead Flyway Birding Trail Association (YFBTA), of which he was a founding member. Rob served as the secretary for YFBTA for about 10 years and has since been the newsletter editor. He was involved in the development of (and now extension of) the Leflay Trail at Saltcoats Regional Park and works actively on helping to find resource people and coordinating YFBTA's annual symposiums. He was also instrumental in creating awareness and conservation of loons on Madge Lake, earning support from YFBTA for the now-annual loon count, brochures, programming and conservation efforts.

Rob's commitment, ideas and enthusiasm, particularly for the work of local societies and for connecting youth with nature, has been tremendously valuable. He has been a great support to the

summer student employed by YFBTA each year, and has used some of his retirement to deliver nature programs for youth in schools and at the Wings Over Wascana Festival in Regina. Of particular note was the Ecomuseum for a Day that Rob organized in Saltcoats as a lead-up to the 2015 Spring Meet. This museum without walls saw students and adults participating in plant walks, weaving baskets, dressing up as Loggerhead Shrikes, learning about their community's relationship with historic wars, and visiting with a live Burrowing Owl. It was a great start to our meet, and a valuable cultural event for the community!

Volunteer Recognition Award: BRIAN JEFFERY

Brian found his way to Nature Saskatchewan by way of owls — Burrowing Owls to be specific. Always one to enjoy the outdoors and wildlife, he found himself particularly drawn to the little owls. From volunteering at the Burrowing Owl Interpretive Centre in Moose Jaw, he connected with Nature Saskatchewan and Operation Burrowing Owl through Margaret Skeel and began to help wherever he could. For at least the past 15 years, Brian has been the go-to volunteer for help with stewardship programs and with preparing the annual appeal to donors for mailing. He makes calls to the landowners that participate in Operation Burrowing Owl, and other stewardship programs, to gather census information and helps keep everyone

interested and engaged. Whenever there have been calendars, reports or program information to be put together for mailing, Brian has been there to help. He has participated in Piping Plover census work in past years, and recently spent a couple of summers doing field observations on the turtles in Wascana Park for a local researcher. A gifted photographer, Brian has generously shared his photos with the Society, and he has often been in the thick of things for Regina-based meets and programs. Everyone who has worked with Brian describes him as a pleasure to work with. It is time for some recognition for this unsung hero!

Cliff Shaw Award: HAROLD FISHER

Each year, the editor of *Blue Jay* chooses a recipient of the Cliff Shaw Award, which is presented for an article that appeared in the most recent four issues of *Blue Jay* that merits special recognition for its contribution in any branch of natural history. In 2017, Harold Fisher was chosen to receive the Cliff Shaw Award for his article "Northern Hawk Owls Use Nest Box", which appeared in the Winter 2016 issue (74.4).

This very well-written article details how Harold Fisher and Marten Stoffel constructed and erected seven nest boxes for Northern Hawk Owls near Candle Lake, to be in place for the 2010 breeding season. Each year in the spring, the boxes were inspected for occupancy, but until 2015 none of them had been used. In May 2015, one nest box was

found to be in use, and an inspection camera revealed five eggs. Later that month, the nest inspection camera revealed four recently hatched chicks and one unhatched egg. In June 2015, Harold and Brent Terry banded the four flightless young, estimated at 13 to 18 days old. Four pictures also accompany the article, each providing pictorial proof to the text (a female Northern Hawk Owl in the nest box, the placement of the nest box in the tree, the eggs, and the chicks at the time of banding).

Aside from being a detailed, well-written and well-illustrated account of Northern Hawk Owls using a nest box, this article is significant to natural history because this is believed to be the first documented occurrence of a Northern Hawk Owl using an artificial nest box erected for that purpose in North America. In discussing the article with Dr. Stuart Houston, he commented "On rare occasions can a sample of one of anything be used in science, but this seems to be the first-ever platform built for a Northern Hawk Owl and used successfully, anywhere. The Birds of North America account was originally written by Jim and Patsy Duncan of Winnipeg and Balmoral, Manitoba and was updated in November 2014 and still had that recently no such successful nesting assist to report. Only time will tell whether an artificial platform will be used again."


Conservation Award: DR. JON M. GERRARD AND P. NAOMI GERRARD

Bald Eagles, and other water-associated birds, have been monitored on Besnard Lake, SK for 50 years thanks to the leadership and dedication of Dr. Jon and P. Naomi Gerrard. Inspired by forays with Dr.

Stuart Houston in the 1960s to climb to nests and band Great Horned Owls, Jon and Naomi Gerrard initiated in 1968 what is now one of the (if not the) longest running monitoring projects of a stable raptor population in the world.

The Gerrards have run the project as 'citizen scientists' while they pursued careers in medicine. The project has encompassed aspects of behavioural ecology, population biology and natural history resulting in over 50 publications. A book "The Bald Eagle: Haunts and Habits of a Wilderness Monarch" authored by Jon M. Gerrard and Gary R. Bortolotti in 1988 has become known to some as the encyclopedia of Bald Eagle information. The most recent publication is a 2013 paper that documented density-dependence in the Besnard Lake Bald Eagle population.

In addition to the amazing wealth of conservation knowledge generated through the Besnard project is the human element of the project. Jon and Naomi have welcomed many family and friends to participate in this amazing study. The Gerrards have largely self-funded this 50-year project. Periodic infusions of grant funding and private funding have also assisted in supporting the monitoring and research including several grants from Nature Saskatchewan.

In this Golden anniversary year of the Besnard Lake project, we congratulate Dr. Jon Gerrard and P. Naomi Gerrard as winners of the 2017 Nature Saskatchewan Conservation Award. Their work is clearly "meritorious work in the interest of conservation in Saskatchewan." 

POETRY

A Bird of His Own Feather

Crow! desultorily perched on a sign
at city limits, designating what
its maximum departure speed should be,
should it, migrating, venture farther south.
But it's midwinter, bird, or almost so--
things feeling Christmasy! bright carollers,
and sleighbells--all of that! What were you thinking,
you primitive, black, corvine creature? What
indeed!

Were you held up consorting (or
at trying to consort) with all your black
and bearded buddies clustered near the mall,
your cousins walking unperturbed among
the shoppers there; or at the nuisance grounds,
competing with their ravenously gorging
of garbage strewn? And twice your weight they are,
more likely thrice, no company for you--
their big bills squawking curt dismissal--"Kwawk!"

So what's your plan, ol' signpost bird--to stay
and tough it out? (The thing's been done before,
you know.) Forget about some delayed flight
to Minnesota, South Dakota. No,
go it alone right here. Hang in there, crow!
Shucks, you'll survive, and we'll again await
your joyful springtime greeting when the days
are warm with April winds, your bright "Aw! Aw!"

Victor C. Friesen

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THE DIRT ON RARE PLANT RESCUE'S FIRST SEASON BACK

Emily Putz
Habitat Stewardship Coordinator
Nature Saskatchewan

Autumn prairie winds have once again blown in the end of a summer field season and the end of Rare Plant Rescue's (RPR's) first field season back in action! Each year, RPR has a busy mix of searching for new rare plant occurrences, monitoring known occurrences and visiting to catch up with our program participants to see how they are doing — this year was no different! Staff spent time engaging with 15 of our current program participants and visited with an additional 20 potential participants, many of

whom were kind enough to let us search their land for this summer's target species. We are very happy to welcome eight new participants to the program. All together, RPR has 82 landowner and land manager participants conserving nearly 105,000 acres of valuable native prairie in Saskatchewan!

As some of you may know from following our blogs this summer, RPR's field crew was very busy. This year, we focused on seven of

our province's federally listed plant species, starting the season off in May looking for the infamous Slender Mouse-ear-cress. As in past years, this bi-annual plant proved elusive yet again, but our hope is with a more favourable growing season in the future we may have some luck.

In early June, we headed to the far southeastern part of our province to hunt for another elusive species, this time helping out our friends



Rolling upland slopes. Photo credit: Desiree Hobbins



Small-flowered Sand-verbena. Photo credit: Emily Putz



Photo credit: Desiree Hobbins

at the Saskatchewan Conservation Data Centre (SK CDC) search for the Small White Lady's-slipper, an orchid that hasn't been seen in Saskatchewan since the late 1800s! Predictive habitat models developed by the Saskatchewan Ministry of Environment were used by the SK CDC to narrow down suitable sites and habitats to search. Although we did not observe any this year, there is still much more suitable area to investigate and our searches gave us a great opportunity to visit some of Saskatchewan's rarest landscapes — floating fens that bounced with every step we took!

Our luck finally changed toward



Smooth Goosefoot. Photo credit: Catherine Boutin



Photo credit: Emily Putz

the end of June while searching and monitoring for the lovely Small-flowered Sand-verbena along the South Saskatchewan River. Seedlings were plentiful, and we found 14 new occurrences of Sand-verbena and many occurrences of the provincially rare Small Lupine. The highlight of this trip was one of the occurrences we were revisiting. This particular monitored occurrence stretched more than 100 metres down the sandy shoreline slope and included over 800 plants!

We spent our hot July weather searching for Tiny Cryptantha near the Alberta-Saskatchewan border. The genus name *Cryptantha* literally means “hidden flowers” and the name is definitely appropriate when you go hunting for this tiny plant. Though we didn't find any new occurrences this year, our searches took us to the fantastic rolling uplands of the South Saskatchewan River valley and we were able to visit with many of the fabulous landowners who care for the native prairie habitat Tiny *Cryptantha* requires.

Late July and August saw a split in the teams, with our search crew heading off to search for Smooth Goosefoot and our monitoring team getting busy checking on known occurrences of Hairy Prairie-clover

and Buffalograss. Our searches this summer for Smooth Goosefoot were a huge success as we confirmed many historical occurrences and found some new ones. One patch found had more than 6,000 plants estimated growing there! We also found large patches of another provincially rare species — Beaked Annual Skeletonweed. After seeing the look-alike Common Skeletonweed all summer, finding this rare species was a nice surprise! During monitoring, Buffalograss seemed to be struggling a bit this year in the heat, making plants hard to identify. Despite this, we still found about half of the known occurrences we were revisiting. Our monitoring of Hairy Prairie-clover, in contrast, was a great success! We revisited close to 60 occurrences of Hairy Prairie-clover this summer and counted all together approximately 5,686 plants of this species alone. Special thanks to Becky Quist, Rebecca Magnus and Kaytlyn Burrows in lending us their assistance to count these monster quarter sections.

Collectively, this season RPR monitored 31 quarter sections to check-up on known occurrences and searched suitable habitat on 32 quarter sections for new rare plant occurrences. These great accomplishments would not have been possible without the perseverance and dedication of our wonderful field staff this summer: Desiree Hobbins, Catherine Boutin, and Michelle Lang. Thank you for making my first year as coordinator of RPR so enjoyable and thank you from everyone here at Nature Saskatchewan!

As always, if you have any questions about RPR or rare plants in general, please feel free to contact me at (306) 780-9417 or rpr@naturesask.ca. I would love to hear from you! 🐦

EGGSHELL FRAGMENTS FROM OLD NESTS AS A POSSIBLE SOURCE OF CALCIUM FOR NESTING SONGBIRDS

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Poultry scientists have long known that calcium is important to the egg-laying chicken.^{1,2} Calcium is now recognized as being no less important to wild birds during the breeding season, with the production of eggs, including their calcareous shells, placing a drain on a bird's calcium reserves.³ Many authors have interpreted observations of wild birds ingesting calcium-rich substances or feeding them to their young as being related to their need to augment and replenish this nutrient during the reproductive season. Sources of calcium for songbirds are varied, through ingestion of calcareous (limestone) grit⁴, sand and gravel containing calcium salts^{5,6}, mollusc shells⁷, and fragments of bone⁸, the latter sometimes obtained from dried feces of predatory mammals^{9,10}. Thus, adequate nourishment of egg-producing females and their young promotes successful reproduction and increases lifetime fitness.¹¹ An additional source of calcium for birds may be fragments of egg shell extracted from the bottom of nests that persisted over winter.

During studies (1970s through mid-1980s) of the diet of songbirds breeding in the dune-ridge forest that separates Lake Manitoba and Delta Marsh (50°11 N, 98°19 W)¹², we occasionally dissected tiny pieces of egg shell from the muscular stomachs of birds during, but not restricted to, the egg-laying period. This was not



FIGURE 1. Yellow Warbler nests such as those shown above that have overwintered may provide a source of egg shell for breeding birds the following spring. The larger nest on the left contains a broken Brown-headed Cowbird egg buried in the bottom of the nest, which is another source of egg shell.

surprising, as egg shell may provide breeding birds with a source of calcium. What was not immediately known, however, was where the birds obtained pieces of egg shell during the early part of the breeding season. The likelihood that egg shells would be found on the ground amid leaf litter in spring prior to egg laying seemed remote, although most species occasionally gathered nesting material on the ground and foraged there.¹³ A clue to the source of egg shell emerged when I observed female Yellow Warblers (*Setophaga petechia*) visiting nests of their own species that persisted through the winter intact. Females frequently removed material from old nests of their own and other species to construct new ones, whereas some females pecked objects hidden

from my view in the bottom of the nest, then left without nesting material. Inspection of the lining of previous years' nests from which young had fledged, now shrivelled after overwintering (Figure 1), often revealed tiny pieces of egg shell embedded in the bottom of the nest. When eggs pip and hatch, pieces of shell may fall to the bottom of the nest where they become available for ingestion later in the year or the following year. Passerine birds generally eat the shells of their eggs as they hatch, which may augment their calcium reserves or they carry and drop the shells some distance from the nest.¹⁴

We did not routinely note pieces of egg shell in stomach contents examined in studies of the diet of species breeding in the ridge

TABLE 1. Egg shell, snail shell, and grit dissected from stomachs of Yellow Warblers at Delta Marsh, Manitoba, 1975 and 1976 (D.G. Busby, *in litt.*, February 23, 1983). Each stomach also contained an array of insect remains.

SPECIMEN NUMBER	NO. PIECES OF EGG SHELL	NO. PIECES OF SNAIL SHELL	NO. PARTICLES OF GRIT
75-7, 7 Jun, ♀	0	1	0
75-10, 12 Jun, ♀	15	0	3
75-13, 12 Jun, ♀	0	1	3
75-21, 29 Jun, ♀	1	0	3
75-24, 1 Jul, ♀	4	0	0
76-1, 22 May, ♂	1	0	0
76-51, 12 Aug, HY	3	0	5

forest, with the exception of the Yellow Warbler, in 1975 and 1976 (Table 1). In this study¹⁵, egg and gastropod (snail) shell, and grit, were recorded infrequently in Yellow Warbler stomachs (D.G. Busby, *in litt.*, February 23, 1983). Out of 54 stomachs (25 ♂♂, 20 ♀♀, 7 hatch year [HY]) examined in 1975, and 53 in 1976 (20 ♂♂, 20 ♀♀, 13 HY), pieces of egg shell 1-2 mm in diameter were recorded in three stomachs (all ♀) in 1975 (5.6%) and two stomachs (♂, HY) in 1976 (3.8%). Snail shell was recorded in two stomachs (both ♀) in 1975 (3.7%), whereas grit was noted in three stomachs (all ♀) in 1975 (5.7%) and 1 stomach (HY) in 1976 (1.9%). These and the other Yellow Warbler stomachs examined contained mostly insects, predominately midges (Diptera: Chironomidae).¹⁵

Comparison of dates egg- and mollusc-shell ingestion were recorded (Table 1) and of clutch-initiation by Yellow Warblers in 1975 and 1976¹⁶ revealed shell was present in stomachs of adult females on dates that covered most of the egg-laying period, whereas the male ingested egg shell soon after arrival in spring, at least four days prior to the first egg laid in the population, in 1976.¹⁶ The HY individual apparently ingested egg shell and grit after the laying period in 1976 (Table 1), although the fledgling may have been fed those materials while still a nestling.

Discussion

Egg shell, snail shell, and grit were ingested purposefully by predominantly female Yellow Warblers, rather than taken accidentally with other food items. The primary methods used by Yellow Warblers to capture prey at Delta Marsh — gleaning insects from foliage or hawking them in flight¹⁵ — do not afford opportunities to obtain egg shell or grit, accidentally or otherwise. Snail shell and grit were probably obtained on the floor of the ridge forest, or possibly on the nearby shore of Lake Manitoba. Tiny pieces of egg shell probably were obtained from old nests prior to or early in the egg-laying stage, but detection of ingested egg shell likely would be underestimated because it does not preserve well in the stomach’s acid environment and is rapidly broken down.^{17,18} In addition to pieces of warbler egg shell in old nests, Brown-headed Cowbird (*Molothrus ater*) eggs that may have been buried in the bottom of them¹⁹ would provide another source of calcium, although it is not known with certainty whether Yellow Warblers are capable of puncturing the disproportionately thick shells of cowbirds’ eggs^{20,21}, although birds with larger and stronger beaks can puncture them^{22,23}.

In summary, data presented here confirm that a small percentage of breeding Yellow Warblers ingested

pieces of egg shell. Anecdotal observations of individuals probing apparently for shell in the bottom of old nests, then leaving without removing nesting material, however, only suggest but do not confirm that these individuals had ingested pieces of egg shell. Video recordings of this behaviour would be required, with cameras set up at old nests *in situ* in which the investigator has placed a known number of pieces of egg shell, from unhatched eggs or nests depredated in a previous year, in the bottom of nests. Video-taping may also reveal other species removing nest material from old Yellow Warbler nests, and possibly also pieces of egg shell.

Acknowledgements

D.G. Busby extracted the data used in Table 1 from original specimen sheets. Research at Delta Marsh in the early years was funded chiefly by the Natural Sciences and Engineering Research Council of Canada, and the Research Grants Program (University of Manitoba), augmented by in-kind support provided by the Delta Marsh Field Station (University of Manitoba). T.J. Underwood commented on a draft of the manuscript.

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POETRY

Bandit Bird

White-breasted nuthatch
on foray
slips headfirst down tree
on quick survey,
peers around trunk,
then, come what may,
he flits to feeder
and grabs the prey.

Beak filled with loot,
he pays no heed
to me and my camera,
watching him feed.
In sharp color photo
I've caught his deed —
black-hooded thief
with a sunflower seed.

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Nuthatch bandit. Photo credit: Donna Gamache

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Editor's Correction
for Volume 75.2
Leopard Frog predation
on emerging adults of
colonizing variegated
meadowhawk dragonflies.

Blue Jay has a wide audience of scientific and lay persons. To facilitate communication and make sure that everyone is referring to the same animal, standard common and scientific names are used. The North American standard for amphibian and reptile names is: *Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in Our Understanding, 7th Edition* (2012, SSAR Herpetological Circular No. 39).

Using this standard, the names of amphibians noted in this paper change as follows: the scientific name for Northern Leopard Frog is *Lithobates pipiens*; the frogs referred to as Striped Chorus Frogs are probably Boreal Chorus Frogs, *Pseudacris maculate*; the scientific name for the tiger salamanders mentioned in the paper is *Ambystoma mavortium*.



Jared Clarke

With the days getting close to the shortest they will be during the whole year, along with driving back and forth from work in the dark, not to mention the lack of biodiversity around currently, being a naturalist in Saskatchewan in December can be a little depressing. But that is only if you don't appreciate the little things. It's at this time of year that I like to keep a bird feeder stocked with black-oil sunflower seeds to make sure that even during these cold and dark months, birds are around our farm.

Ideally, you will find me on Saturday and Sunday mornings watching our feeder out the dining room window. We get the regular crew — Downy and Hairy Woodpeckers, maybe a nuthatch, usually a big flock of Common Redpolls, maybe a goldfinch — but always Black-capped Chickadees! It is the chickadees that bring me the greatest joy.

I have been banding Black-capped Chickadees at our farm since 2010. I set up a little trap at the bird feeder and catch the birds over the course of the winter. If I were simply watching the feeders, I would estimate that between 15 and 20 chickadees live in our yard. However, over the last six years, I have captured between 22 and 43 chickadees per winter, with an average of 34! Most of

THE NATURE NOTEBOOK: BLACK-CAPPED CHICKADEES BRING A SPARK TO WINTER DAYS

the chickadees I band I never see again, but some stick around for a long time. For example, I banded a chickadee with band #2340-95733 on October 23, 2011, and caught it again on January 11, 2014, and again on November 29, 2015, and then again on December 4, 2016! It was hatched in 2011, so in 2016 it was around five years, six months old! The oldest known chickadee record is 11 years, six months from Minnesota.

While the sun is setting on a cold December evening, watch for chickadees to enter a bird house in your yard. They will spend the night in this cavity to stay warm, but use an additional strategy of lowering their body temperature and metabolism to reduce the amount of energy needed during the night. The bird's temperature decreases by 10-12°C. Scientists call this strategy torpor.

Weighing only 10-13 grams (the equivalent of two loonies), Black-capped Chickadees have more attitude than a bird twice their size. It is this attitude that is so entertaining to watch at the feeder, as they chase off other birds. It is also this attitude that gives the chickadee the audacity to bite your hand while being



Black-capped Chickadee. Photo credit: Jared Clarke

banded, with surprising strength and always in the most sensitive spots, like the skin just adjacent to your finger nail! With patience and some walnuts or seeds, chickadees will eat out of your hand and create an amazing experience for kids. Here at our farm, the chickadees alarm call when I go outside, because they know that I'm the one who catches and bands them!

Chickadees are legendary. And they put a smile on my face in the cold, dark days of December. I hope they put a smile on your face, too.

Jared Clarke is a Grade 6/7 teacher and biologist who lives on a small farm near Edenwold, SK, with his wife Kristen and children Rowan and Teal. He hosts a nature radio program called The Prairie Naturalist, on Thursdays at 6:00 pm, on 91.3 FM CJTR in Regina. Follow him on Twitter @jaredclarke5 or on Facebook @ThePrairieNaturalist. 🐦

POETRY

Winter's Finery

A spruce bough's snow's a bluish lustre,
the spiny frostbound fingers outthrust;
but tinselled by the bright sun's
splendour,
each tip's begun to gleam and twinkle--
a dripping pendant diamond trinket.

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TRUMPETER SWANS IN THE STRAWBERRY LAKES AREA OF SOUTHEAST SASKATCHEWAN

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Recent years have seen the appearance of the Trumpeter Swan (*Cygnus buccinator*) as a summer resident in southeast Saskatchewan at the Strawberry Lakes area approximately 60 km east of Regina. This marks a new instance of the re-establishment of a bird, once thought to be highly threatened, in its former range.

The recent residency of Trumpeter Swans in the Strawberry Lakes area was first reported in 2014 and confirmed by various observers in that and subsequent years. That June, a first identification was made by Bob Luterbach of a single swan, and confirmed with photographs by Trevor Herriot later that month, then showing an adult pair with five young (there were four cygnets by the time of observations later in the summer). An adult pair was seen at that same location in spring of 2015, but only a single swan was seen there through later parts of the summer. For both the 2016 and 2017 seasons, there was an adult pair with five cygnets seen through the breeding season.

In the summer of 2017, a pair

of adult Trumpeter Swans was also seen approximately 2 km away, at another nearby lake with similar habitat. This was confirmed as being a different pair of adult swans by the author in July of that year. No young were observed with this second pair through the season.

This re-appearance of Trumpeter Swans in a new area is part of the ongoing recovery of the species. The Trumpeter Swan, the largest of North America's native waterfowl, and the largest of the world's seven swan species, was formerly widespread in northern North America, certainly on the western half of the continent, and in much of the east (Banko, 1960; Lumsden 1984). The original population was vastly reduced by subsistence harvesting and habitat change, and likely by the massive 19th century harvest of swan skins and quills (Houston and Houston, 1997). In the early decades of the 20th century, the species was thought to be on the verge of extinction due to the very low numbers known to exist — at one time thought to be fewer than 70 birds in the wild (Mitchell and Eichholz, 2010). This situation improved as previously-unknown flocks were discovered in the 1950s, and through the effect of conservation efforts that involved both habitat

protection and re-introduction in a number of jurisdictions in Canada and the United States.

Systematic monitoring of Trumpeter Swan populations has taken the form of a North American survey that was first conducted in 1968, and has been repeated every five years since 1975. The most recent results for the North American Trumpeter Swan Survey (NATSS) are for 2015. This work yielded an estimate of more than 63,000 Trumpeter Swans for North America. This added to an encouraging population trend that showed continual increases for all surveys from 1968 to 2015, with an estimated annual growth rate of 6.6% per year (Groves, 2017). With these trends, Trumpeter Swans are currently considered 'Not at Risk' under federal government wildlife status designations, since last being assessed in 1996. They are also not considered a 'Species at Risk' under Government of Saskatchewan designations, although they are addressed under Saskatchewan's 'Activity Restriction Guidelines for Sensitive Species'.

So, the broader North American context over the last several decades is of growth in Trumpeter Swan numbers and improved risk status. However, the situation in Saskatchewan is that breeding Trumpeter Swans are still



Photo credit: Kim Mann

relatively unusual and localized. There were several instances in the Cypress Hills area from the 1950s into the 1990s (Burgess, 1997). More recently, there have been populations in the Greenwater Lake and Porcupine Forest areas in east-central Saskatchewan (Beaulieu, 1999). Another recent nesting site has been at Bagwa Lake in Prince Albert National Park. There is no complete up-to-date view of Saskatchewan populations because conservation and monitoring efforts are directed toward species considered to be of greater concern. Also, active surveying for Saskatchewan was not included in the 2015 North America survey described above, due to funding constraints; the most recent Saskatchewan count for that survey was 53 birds in 2005. There may be an updated view for Saskatchewan available through the province's recently-launched breeding bird atlas project; however, preliminary data available at the time of writing did not show any sites beyond those already known.

Over the longer historical horizon, Trumpeter Swans have been known in the general part of Saskatchewan where the new Strawberry Lakes birds have been observed. Burgess (1997) and Callin (1980) provide evidence for the birds being in that part of Saskatchewan in the 1800s and early 1900s. However, it is not known exactly how common they were in the area as nesting birds, and

there is no record as to whether they have previously nested in the specific location in the Strawberry Lakes where they are being seen now. Currently, the nearest other nesting site is probably the Riding Mountain area in Manitoba.

This new instance of nesting Trumpeter Swans will bear further observation to see how well they become established in the area, and to ensure their protection as necessary. As more knowledge is gained of the Strawberry Lakes swans, it is also hoped that information can be gained about their wintering grounds to determine whether their protection and circumstances there are sufficient to allow them to continue to thrive.

Acknowledgements:

I would like to thank Bob Luterbach and Trevor Herriot for their initial observations and identification of the Strawberry Lakes Trumpeter Swans, and for impressing on a much-less-experienced birder the significance of their presence there. I would also like to thank Kim Mann for contributing her beautiful photographs of one of

the swan families, and her willingness to discuss her observations with me. Finally, I would like to thank the following individuals for their responses to my inquiries, or for putting me in touch with those who could discuss Trumpeter Swans with me: C. Stuart Houston, Rhys Beaulieu, Kiel Drake, Garnet Raven, Mark Bidwell.

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Photo credit: Kim Mann

HAPPY 30TH ANNIVERSARY, OPERATION BURROWING OWL!



Photo credit: Tammy Thomas

Kaytlyn Burrows

Habitat Stewardship Coordinator
Nature Saskatchewan

2017 marks 30 years of Burrowing Owl conservation in the province! Nature Saskatchewan's Operation Burrowing Owl, a voluntary stewardship program, launched in 1987 through a partnership with Nature Saskatchewan, the Saskatchewan Wildlife Federation, World Wildlife Fund Canada, Wildlife Habitat Canada, and the Saskatchewan Ministry of Environment. Public awareness was increased by the presence of Prince

Philip at the launch of Operation Burrowing Owl (he was the president of the World Wildlife Fund at the time), which led to increased concern and desire for the protection of the species by the public. Operation Burrowing Owl forms a partnership with landowners/land managers who voluntarily agree to conserve habitat for the endangered Burrowing Owl and other prairie wildlife. Today, it is one of the longest running voluntary stewardship programs in Canada!

To commemorate this special occasion, Nature Saskatchewan hosted a 30th anniversary celebration on July 20, 2017 at the Canadian

Italian Club in Regina. More than 100 supporters of the program gathered to celebrate, learn, and share their passion for conservation, stewardship, and Burrowing Owls. It was a diverse crowd of 30-year long program participants to new participants, their families and friends, as well as a few of those who had been involved with the creation and initiation of Operation Burrowing Owl. It was a great opportunity for old friends to reunite and catch up after so many years. The evening began with a delicious meal catered by the Canadian Italian Club followed by several



Photo credit: Jenna Van Parys



OBO's 30th anniversary celebration at the Canadian Italian Club in Regina. Photo credit: Rebecca Magnus

presentations. Lorne Scott led the first presentation of the evening. Lorne was involved in the initiation of Operation Burrowing Owl so it was very fitting that he discussed how the program began back in 1987. Next, I discussed how the program evolved from those early years to where the program is today. Lastly, Lori Johnson from the Saskatchewan Burrowing Owl Interpretive Centre talked about owl biology and showed off her very adorable date for the evening, Peanut, the live Burrowing Owl!

We also had special limited edition Operation Burrowing Owl 30th anniversary merchandise for sale with all proceeds going to the program. The merchandise includes t-shirts featuring a Burrowing Owl sketch on the front with a 30th anniversary logo on the back, a plush Burrowing Owl puppet, and a steel Burrowing Owl indoor/outdoor ornament. We raised just over \$1,500 that will go directly back into programming!

I would like to thank Lorne and Lori (and Peanut!) for presenting and helping us celebrate. I would also like to thank all those who were involved in the planning and I am so grateful to everyone that attended the event! Finally, thank you to the dedicated participants — we look forward to the next 30 years of Operation Burrowing Owl and continuing to promote the Burrowing Owl as a well-known symbol of prairie conservation for generations to come in Saskatchewan!

Don't forget! The 30th anniversary merchandise is still available for purchase! Please visit our online store at www.naturesask.ca/store and look under 'Promotional Items' or call 1-800-667-HOOT (4668) to purchase your 30th anniversary swag and help support Operation Burrowing Owl!



30TH ANNIVERSARY MERCHANDISE

Happy 30th Anniversary to Operation Burrowing Owl! We are excited to be celebrating 30 years of conservation and stewardship in Saskatchewan! To help celebrate, we have created limited edition 30th anniversary merchandise. Proceeds go directly back to our programming. Get yours while supplies last!

To order, please visit our online store at www.naturesask.ca/store and click on 'Promotional Items' or call the Nature Saskatchewan office at 1-800-667-HOOT (4668).



Burrowing Owl T-shirts \$35
Available in V-neck (grey with black owl sketch and purple with white owl sketch); Crew neck (grey and teal with black owl sketch). Each shirt has a 30th anniversary logo across the back shoulders and a Nature Saskatchewan logo along one sleeve. Available in sizes S-2XL.

Plush Burrowing Owl Puppet \$25
Holiday Special \$20
For the young and the young at heart!



Black Metal
Burrowing Owl Ornament \$50
Holiday Special \$40
This steel owl stands approximately nine inches tall and is painted black with indoor/outdoor paint. A nice addition to any garden, yard or home decor.

CELEBRATING NATURE SASKATCHEWAN'S VOLUNTEER STEWARDS

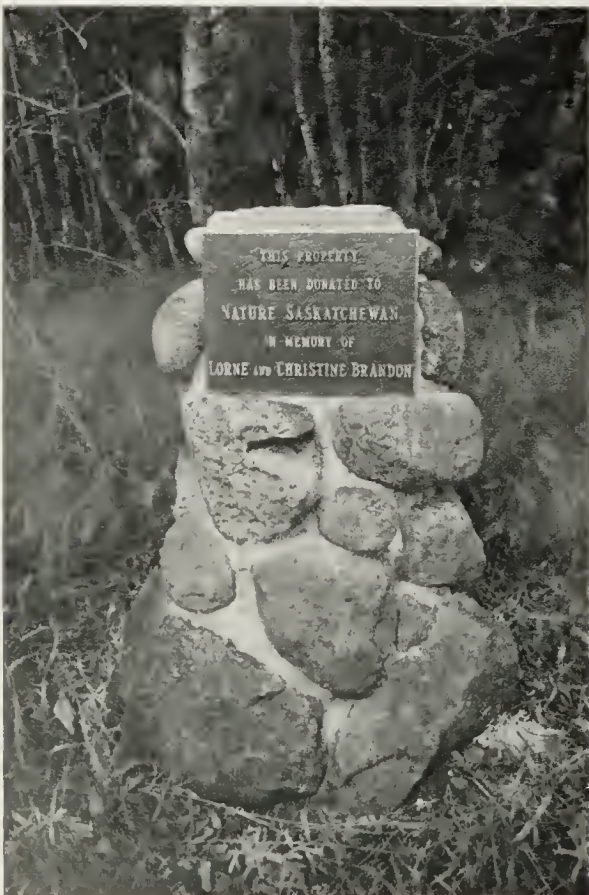
NAME OF SANCTUARY: BRANDON LAND



All photos by Branimir Gjetvaj

Nature Saskatchewan salutes stewards David Weiman and Lionel Hughes

Rob Wilson
on behalf of Nature Saskatchewan



QUESTIONS AND ANSWERS WITH DAVID WEIMAN

RW • How long have you been a volunteer steward of Nature Saskatchewan's Brandon Land Sanctuary?

DW • I have been acting as a steward continuously since 1998.

RW • How did you become involved as a land steward of the property?

DW • The Kelsey Ecological Society was founded in 1998. I was one of the founders. In 1998, another founding member of the society, Leona Pollock, happened to also be a board member of Nature Saskatchewan. One day Leona informed our Kelsey Society that two sisters, members of the Brandon family (Bette Brandon and Donna Green), were offering to donate 16 acres of land to Nature Saskatchewan. Leona, on behalf of Nature Saskatchewan, requested that the Kelsey Society assist with stewardship of this newly acquired

land and further suggested that I be a steward. At the same time two other members, Lionel Hughes and Michelle Hughes expressed interest in assisting. They also volunteered. In this manner Lionel and I and Michelle became stewards of the Brandon Land on behalf of Nature Saskatchewan. Today Lionel and I continue to serve as stewards.

RW • What motivates you to continue to serve?

DW • I am a strong believer in the efforts and work of Nature Saskatchewan because the organization advocates for nature by asking humanity to act harmoniously with nature. I support Nature Saskatchewan by holding a life membership, by continuing to act as one of the volunteer stewards and by participating in some of its programs.



QUESTIONS AND ANSWERS WITH LIONEL HUGHES

RW • How long have you been associated with the Brandon Land Sanctuary?

LH • I have been a steward of the Brandon Land since 1998. At that time I was new to living in Saskatchewan. I was in the early stages of the development of an understanding and appreciation of the ecosystems of the province. I was happy to volunteer for the assignment because I viewed it as an opportunity to further my knowledge of Saskatchewan.

RW • How did you become involved as a land steward on behalf of Nature Saskatchewan?

LH • I was unfamiliar with Nature Saskatchewan. I attended an

Annual General Meeting. I learned of the philosophies and programs of the organization. I became very interested. When an opportunity to volunteer as one of the stewards of the Brandon Land was presented, I was excited to accept the invitation. My wife and I had recently founded our magazine, *Saskatchewan Naturally* (the name of the magazine was subsequently changed to *Prairies North*). We knew that the objectives of Nature Saskatchewan coincided with the objectives of our magazine.

RW • Why have you chosen to continue your involvement?

LH • I learned two things in the early years of acting as a steward. The first was that there is a need to provide

awareness of environmental issues and that the education must be continuous. The second thing is the fact that folks want the knowledge. I am happy to help to with that education.

RW • Has your work as a steward been a solitary undertaking?

LH • No. Many people take an interest in the land. I want to mention that when I first began my stewardship journey I had the good fortune to share the duty with David Weiman. David served as a wonderful mentor and he was a primary source of information about nature. James Nelson, who owns land that adjoins the sanctuary, has been a tremendous help throughout the years.

RW • Is there something about the Brandon Land that you wish to highlight to readers of *Blue Jay*?

LH • A number of trees have been knocked down on the property. A plough wind in 2012 devastated a portion of the property. The policy of Nature Saskatchewan is to allow the natural processes to transform the land. The downing of the trees has created an opportunity to observe the processes of regeneration that are underway as the area transforms to its natural state with climax vegetation. I, for one, will be watching with great interest.

Nature Saskatchewan is responsible for seven parcels of land and is working to improve its policies and processes with regard to those lands. Each parcel has a volunteer steward(s) who 'keeps eyes and ears open' and periodically reports to Nature Saskatchewan.

Thank you, David Weiman and Lionel Hughes. You are a 'voice for nature,' working toward achieving 'humanity in harmony with nature.' 🐦

2017 LOON INITIATIVES REPORT

MADGE LAKE, DUCK MT. PROVINCIAL PARK

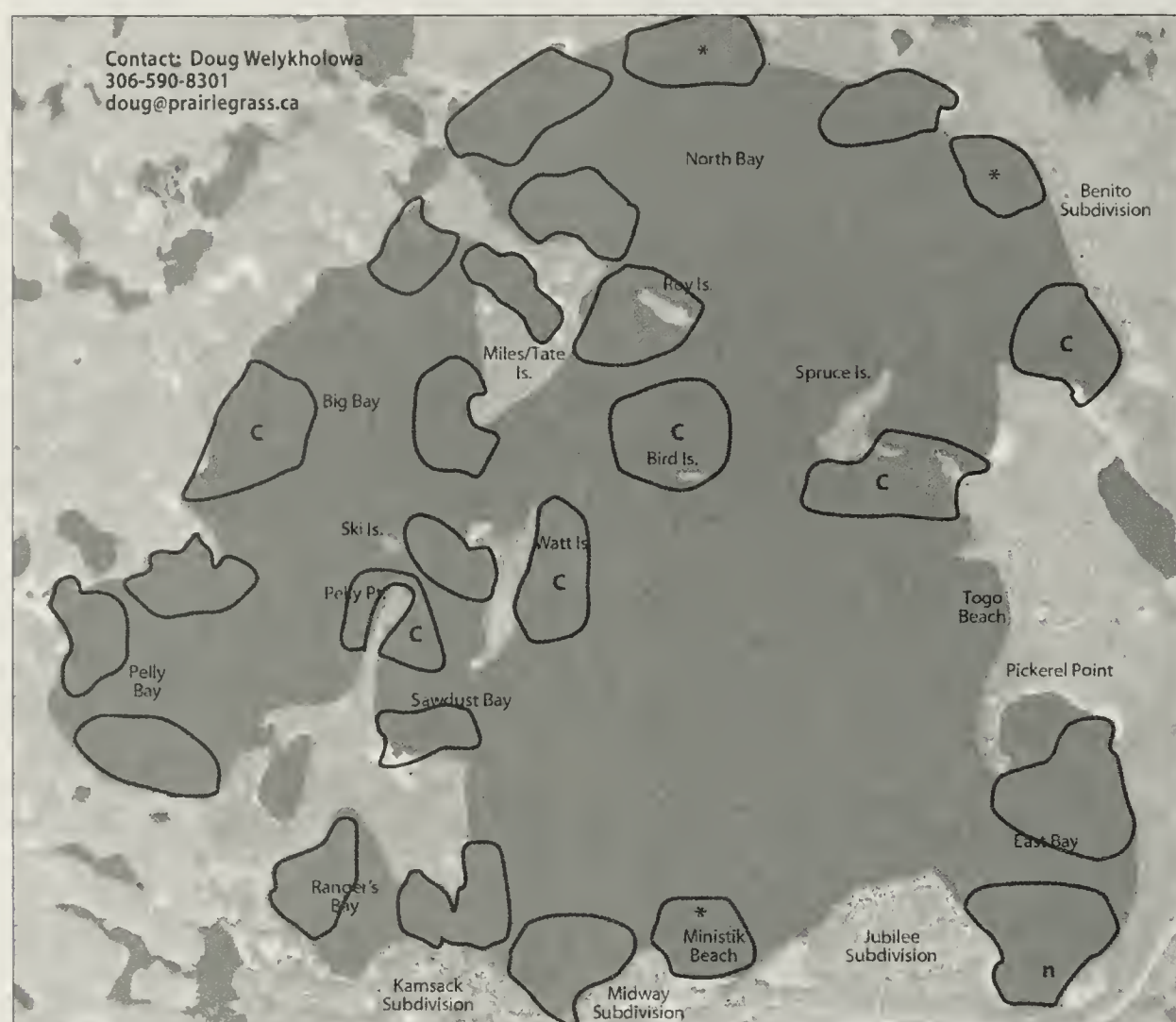


FIGURE 1: 2016 established loon territories.

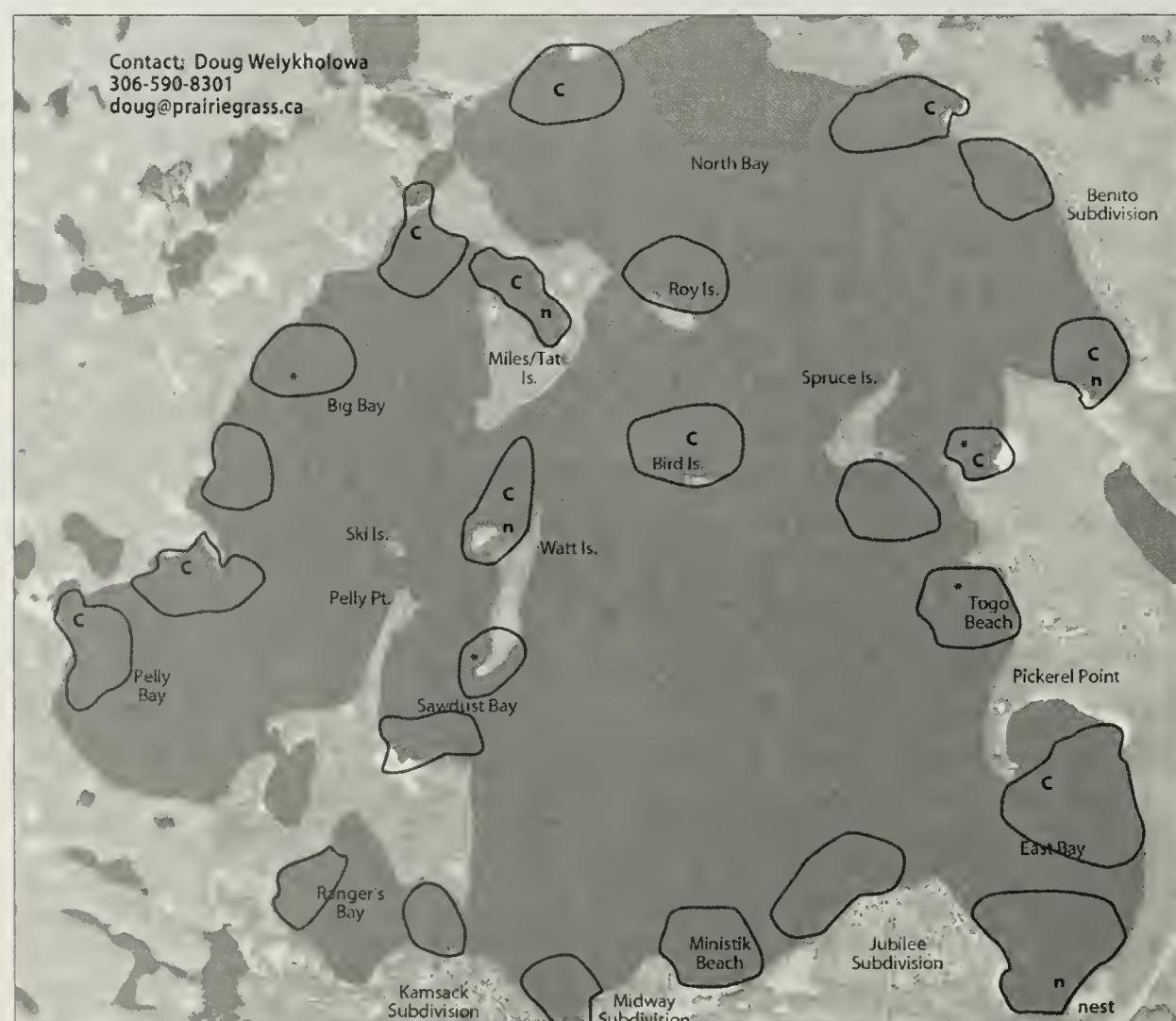


FIGURE 2: 2017 established loon territories.



Doug Welykholowa

YFBTA Loon Initiatives Committee

Chairperson

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The Yellowhead Flyway Birding Trail Association Loon Initiatives Committee (YFBTA LIC) conducted its annual loon survey at Madge Lake over the spring and summer months. We also continued to work on other initiatives involving education and information about the Common Loon with the Duck Mountain Provincial Park Interpreters.

For the third year in a row, the ice was off the lake about three weeks earlier than in recent years. This allowed the various migratory birds, including loons, to gain access to their nesting grounds early.

Loons that have previously established territories on Madge will normally return to the same spot unless something has happened to disrupt the pair or if undesirable changes to the territory have occurred. Each year we have noted up to a 25 per cent change in territories, with the old ones being abandoned or modified and new ones established. This may be a result of old pairs not returning, and new pairs establishing a new territory, or established pairs abandoning one area for another. We have also noted some modifications to the rough

boundaries of older territories each year, based on where each pair tends to frequent.

The two maps (Fig. 1 and 2) show the changes to the territories observed from 2016 to 2017. Twenty-five territories were observed this year, down one from 2016. Five territories from 2016 were abandoned, and four new ones (marked with * in Figure 2) were established. Note that three of the five abandoned territories were initially occupied in the spring, but they were abandoned by early July. The territories marked with a 'C' indicate where chicks were successfully hatched. Four nests (marked with an 'n') were found and photographed this year, compared with only one in 2016. Note that a number of reoccupied territories showed some change from 2016, and two of the newly established territories were in areas that had

previously been occupied prior to 2016. What has become apparent since we started keeping detailed records in 2012, is that the birds avoid certain areas, but will re-use a previously occupied area.

We found five newly hatched chicks on June 20 and an additional eight on July 8, with one of the previous five failing to survive. In August, we found an additional four juveniles with adults that had been observed displaying nesting behaviour in June and July. In total, 16 of the 17 hatchlings survived into the fall. An additional 12 juveniles were noted on the lake in mid-September, for a total of 28 juveniles. These were likely fly-ins from other areas, as they were feeding in areas outside the established territories. By this time, only 25 adults remained on the lake, with the others departing for their winter feeding grounds.



FIGURE 3: New loon nests discovered in 2017. Photo credits: Doug Welykholowa

POETRY

Greetings

I slowly walked across the old farmyard
(my boyhood home three-quarters century
ago), grayed house and rusty barn still there
to greet me on this chill November day,
with sometime spits of rain. Beyond the barn
in a low dip of pasture stretched a slough
not there before, the wet years now prevailing,
and boasting stands of cattails, rank on rank,
their tannish spikes just past the point of bursting--
a something else to greet, appreciate.

Then from the west appeared a massive bird,
an eagle in slow flight, a lumbering
of wings, to almost where I stood--and then
before continuing its eastward course,
its moving heavily away, it paused;
and with an easy soaring, sailed a brief
half-circle there about me, which became,
it seemed, a kind of greeting too (at least
surveillance of this earthbound man-thing, waving).

Victor C. Friesen
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victorcfriesen@yahoo.com

Three of the four nests observed went on to produce surviving hatchlings, while the single egg on the fourth one failed to hatch. Two of the four nests were on the flanks of beaver lodges, while the other two were on well-protected shorelines. We were unable to spot the nests in the remaining territories from the water. We will track these sites in the future to see if the birds continue to return to the same nesting site.

As in the previous two years, we have also observed that some birds appear to be hiding their chicks in areas that are difficult to get to with power boats. This is based on observations of loon pairs where no chicks are spotted, but where these pairs exhibit the same type of nervous, protective behaviour throughout the summer that loons with chicks display. Occasionally we then observe these same birds later protecting juveniles at the end of the season in their established territories. It appears to be more prevalent in areas where the boat traffic is higher.

This year we again noted large numbers of unpaired adults feeding on the lake. Up to 20 birds at a time were observed on any given day, with at least 28 unpaired adults occupying the lake during the middle of the summer. Extrapolating our figures, the lake was averaging 70 to 80 loons throughout the summer, including the 25 territorial pairs and the unpaired groups. This is consistent with previous years' counts. See Table 1 for the monthly counts.

Overall, the adult loon population continues to thrive. Note that our chick/juvenile count was more than double the number observed last year. The health of the lake itself doesn't seem to be a problem, as other species such as grebes and ducks appear to be increasing in numbers each year. As in previous



FIGURE 4: Adult and four-week-old chick. Photo credit: Doug Welykholowa

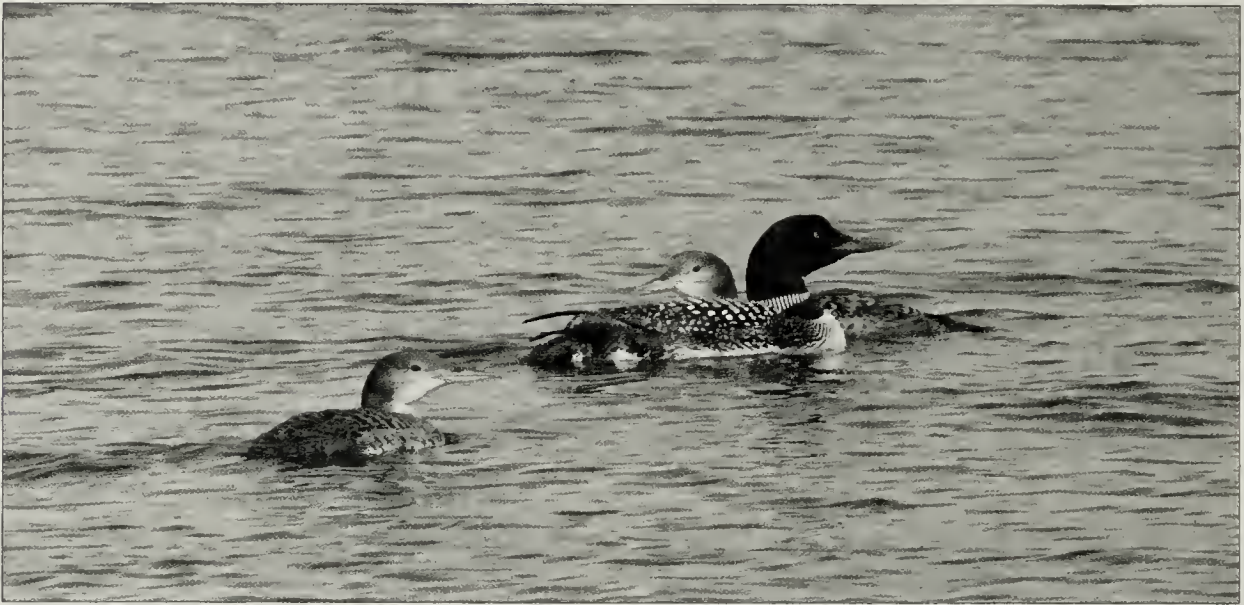


FIGURE 5: Adult and two juveniles (approximately eight weeks old). Photo credit: Doug Welykholowa

years, where we lack data is in how many nests are actually occupied and how many eggs are laid, in order to draw meaningful conclusions on chick production and survivability. As noted previously, we are not currently capable of doing a proper nest search and egg count. This would have to be the subject for possible research grants in the future.

In addition to the annual Madge Lake Loon Survey, the LIC continues to work on a number of other projects. This included the deployment of three sets of loon nesting buoys. The intent is to keep power boats from approaching these areas too closely, in order to protect eggs and young chicks from drowning in boat wakes. The park and YFBTA LIC will review their use and placement annually. Other projects were providing the

park interpreters with photos and research documents on the Common Loon, and assisting the interpreters in presenting their loon program on two occasions.

Two other events involving the loons at the lake are worth noting. First, on June 29, Kim and Colleen Pennell spotted a Loon and a small chick in the ditch across from DJ's service (Figure 7). Apparently, the loon was attempting to crawl from the slough on that side of the road to the lake. Both Greg Podovinnikoff and I were notified, but neither of us could find any sign of the loons when we got there shortly afterwards. Had we found them, we would have attempted to capture and transport them to a spot on the lake where they could feed without interference from other loons. The odd thing is that the slough they

TABLE 1. 2017 Count Results.

PERIOD	PAIRED ADULTS	UNPAIRED ADULTS	CHICKS/JUVENILES
JUN - EARLY JUL	56	6	12
MID JUL - MID AUG	50	28	12
LATE AUG	50	5	16



FIGURE 6: A group of three young adults. Photo credit: Doug Welykholowa

were in is too small for the adults to fly in and out of, so what likely happened is that the adults got stranded there in the spring, and somehow managed to safely raise one chick. We don't know what happened to these birds, as they weren't spotted again.

The second event was two videos sent to me, via Maureen Falkiner, from cottage owners who were kayaking in Ranger Bay in early July. They found themselves near a group of nine young adult loons. The loons appeared to be swimming together and were being very vocal, sounding their tremolo (crazy laugh) call. They also began to do the penguin dance and flap their wings while scuttling across the surface of the water. Had it been a single pair of loons doing this, it would have indicated that the birds were nervous with having the kayakers that close to them. However, after I did some reading, I discovered that what was likely happening is that this group of young unpaired loons were simply interacting with each other, and the dancing, etc., was most likely the loons attempting to assert a pecking

order. They were close to the known territory of a pair of loons, and it is likely that the male of that pair had joined the group and was perhaps agitated by their presence in his territory. Researchers in Ontario and Minnesota have previously noted this type of behaviour.

We will continue to work with the park staff to improve awareness of nesting loons on Madge Lake through information provided by the park interpretation program, brochures, and signage, as well as reports to the cottage owners.

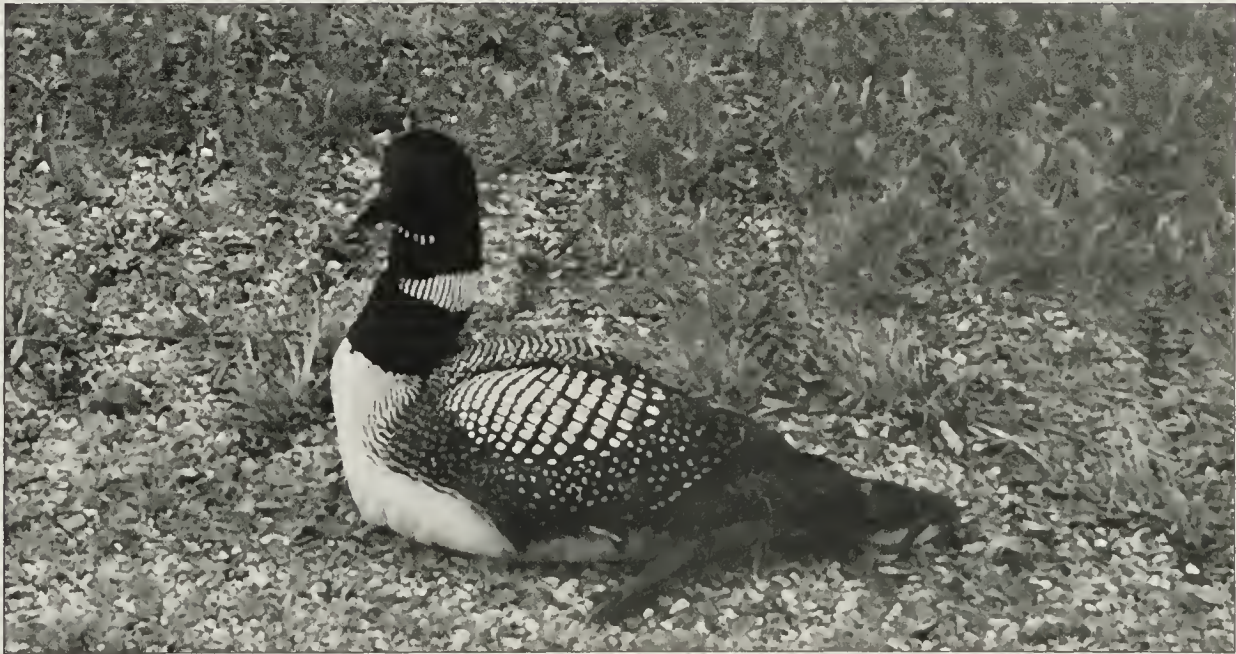


FIGURE 7: Adult loon and chick attempting to cross highway across from DJ's service. Note the small chick at the rear of the adult, its head underneath the adult's tail feathers. Photo credit: Kim and Colleen Pennell.

I am also appealing to have other cottage owners with boats assist me in doing periodic counts in areas that they may frequent throughout the summer. This would greatly assist us by providing additional statistics, which will help us in better analyzing our count information. I have count sheets available for their use. Please contact me if you are interested.

We would once again like to thank the many agencies that have provided assistance and sponsorship for our various projects: Duck Mountain Provincial Park Staff, the Saskatchewan Fish and Wildlife Development fund, Nature Saskatchewan, Bird Studies Canada and the YFBTA. We would also like to thank the park residents who have taken an interest in our projects and those who have contributed to the annual survey. These include Sharon Korb and Kevin Streat, Lloyd and Sandra Benson, Bill Graham, Barb Trofimenikoff and Clark Gable. We would also like to thank acting park staff and the park interpreters, who have provided excellent support and continue to work closely with us on all our loon-related projects. Lastly, thanks to the Madge Lake Cottage Owners Association (MLCOA), which sponsors our continuing membership in the Birds Studies Canada annual Lakes Loon Survey. 🐦

PLOVERS IN A DANGEROUS TIDE

Ashley Vass

Habitat Stewardship Coordinator
Nature Saskatchewan

As many of you may remember, the 2016 International Piping Plover Breeding Census result in Saskatchewan was not much different from the low number in 2011 (799 birds in 2016 compared to 778 birds in 2011). Although the total number of plovers was still nearly half of the 2006 result, a positive outcome was that the number of breeding pairs was nearly 50 per cent higher than in 2011 (281 pairs compared to 195 in 2011) — potentially leading to higher recruitment into the population even if nest success rates do not increase. Although we would have to wait until 2021 to get an appropriate comparison, hope was high for the

success of this endangered shorebird. However, the journey from breeding locations to wintering grounds can be treacherous for any migratory species, Piping Plovers being no exception, and weather is a huge factor.

Piping Plovers overwinter along the coasts of the Gulf of Mexico, southeastern United States and the Caribbean islands. This includes the coasts of Texas, Florida, Puerto Rico, the Bahamas, and many of the shorelines that have been hit hard by this record-breaking hurricane season. These powerful hurricanes are making landfall just as the plovers should be arriving at their winter homes. Therefore, it could not only affect their ability to navigate their usual flyways and potentially reduce opportunities to stop and refuel along the way, but the plovers could also be forced to leave their wintering coastlines shortly after arriving.

Last fall, following the 2016 count, Hurricane Matthew hit the Bahamas and the number of Piping Plovers there dropped by two-thirds. Although there were likely more plovers from the Atlantic population than the Great Lakes or Prairie populations, their wintering grounds all overlap. Despite that destructive storm, numbers of plovers counted by volunteers in

Nature Saskatchewan's Plovers on Shore program are looking good. With only about one-third of participants responding so far (and only 17 per cent of the total number of sites), 15 pairs, six young, and 22 single adult Piping Plovers have been reported.

We are so grateful that landowners are willing to learn about, monitor, and protect this endangered species and are very happy to welcome nine new participants to the program. This means there are now 64 landowners conserving 132 miles of Saskatchewan shoreline for Piping Plovers. Saskatchewan is a very important part of the Piping Plover breeding range and with havoc on their wintering grounds we can't be thankful enough to have the support of landowners looking after Piping Plovers and their habitat.

If you're a 'glass half full' type of person, hurricanes are not all bad news for plovers. They can smooth beaches and remove overgrowth and other vegetation that plovers avoid, potentially creating more Piping Plover habitat as long as they're still around to enjoy it.

If you would like more information about Plovers on Shore, or would like to report a species at risk sighting, please call 306-780-9832 or 1-800-667-HOOT (4668) toll-free, or email outreach@naturesask.ca.

POETRY

Jewels

A garter snake and countless children
dash through the boggy ditch.
Emerge like running jewels
into the sun
Through the short, new grass.

Screaming red-tail makes flawless circles
Is she sated, uninterested?
Or is the snakes' flashing race
too swift
For even her meteoric fall?

George Grassick

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Lumsden, SK S0G 3C0
ggrassick@sasktel.net



Saskatchewan is a very important part of the Piping Plover breeding range. Photo credit: Jenna Van Pary

SHRUBS FOR SHRIKES PROGRAM BREAKS 200 PARTICIPANTS!

Ashley Vass
Habitat Stewardship Coordinator
Nature Saskatchewan

Thanks to our hard-working summer students, Tiffany Blampied and Jenna Van Parys, the Shrubs for Shrikes program had a very successful summer. We were able to visit with 39 landowners that had Loggerhead Shrikes nesting on their property to discuss the program and see if they were interested in joining. Of those 39 potential participants, 33 joined the program! These new landowners are conserving habitat and monitoring for Loggerhead Shrikes on nearly 5,000 acres of land!

We were also able to visit with 25 of our existing participants and always enjoy hearing stories of other

wildlife in the area, how the crops and cattle are doing this year, and of course, stories of gory impalements never get old. Thanks to the interest and willingness of some very helpful individuals in Saskatchewan, Shrubs for Shrikes now has 230 participants conserving almost 45,000 acres for Loggerhead Shrikes. We want to take this opportunity to thank everyone that welcomed us onto their property — your kindness and hospitality does not go unnoticed.

Thanks to feedback from participants, we created a new Beneficial Management Practices Plan for Loggerhead Shrikes. These booklets provide information on the Loggerhead Shrike population and life cycle, and help landowners with Loggerhead Shrike identification, distinguishing preferred habitat, and determining land practices that are beneficial for shrikes, while not negatively affecting agricultural operations. We distributed 45 copies of this plan over the summer and they were well received.

The census of Shrubs for Shrikes participants is 44 per cent complete and numbers are slightly lower than last year. So far, 40 pairs, 16 single adults and 31 young Loggerhead Shrikes have been reported. Public sightings are showing the same trend, with a slightly higher number of people reporting, yet a slightly lower number of individual shrikes. Of the 54 public sightings, 26 pairs, 31 singles and 20 young were reported. However, staff grid road searches proved to be very fruitful thanks to the dedication of our assistants, and the search location suggested by the Loggerhead Shrike Recovery Team Lead. Summer staff spent 10 days looking for Loggerhead Shrikes in the Arm River/Eyebrow Plain area and, along with other incidental sightings from the summer, staff reported 110

Loggerhead Shrikes — over twice as many more than last year! We look forward to the final results of our participant census, and to see what next summer holds for the Shrubs for Shrikes Program.

If you would like more information about Shrubs for Shrikes, or would like to report a species at risk sighting, please call 306-780-9832 or 1-800-667-HOOT (4668) toll-free, or email outreach@naturesask.ca.

POETRY

Late Summer

Three does, three fawns,
Cross the road to the fence
One by one
They hop over.

One doe, one fawn,
Turn, wide eyed to me
Big ears scope
Lift, widen.

The cows quiet
The black bull still
The spotted one
Sniffs and lows.

The deer gone
But still there
Dappled, solid
Aspen, Willow cloaked.

George Grassick
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ggrassick@sasktel.net



Loggerhead Shrikes. Photo credit: Kris Mutafov

STEWARDS OF SASKATCHEWAN BANNER PROGRAM STARTS MONITORING SPECIES

Ashley Vass

Habitat Stewardship Coordinator
Nature Saskatchewan

This summer, we introduced a new participant census for monitoring species trends in the Stewards of Saskatchewan (SOS) banner program for all other species at risk. The survey is intended to collect general population data on multiple species at risk and includes 10 species that were chosen for having the highest frequency of occurrence among program participants. Species included in the survey are: Barn Swallow, Ferruginous Hawk, Short-eared Owl, American Badger, Sprague's Pipit, Common Nighthawk, Bobolink, Northern Leopard Frog, Tiger Salamander, and Monarch. The survey species are listed as either Special Concern, Threatened, or Endangered by the Committee on the Status of



Northern Leopard Frog. Photo credit: Ashley Vass

Endangered Wildlife in Canada or Schedule 1 of the federal Species at Risk Act. Pictures are included for reference and participants are asked only to report species if they are sure they are there. Thus, the survey acts as an indicator of species presence but not necessarily absence.

To date, we have received responses from approximately 40 per cent of SOS banner program participants. Highlights from the survey are a higher number of Barn Swallows than expected and a lower number of Northern Leopard Frogs. Seventy per cent of the sites reported on have occurrences of Barn Swallows, which is great news because Barn Swallows, among many other species of aerial insectivores, are experiencing general declines across their ranges. Northern Leopard Frogs were present on less than half the number of sites with previous occurrences. As stated above, a species that is not reported by a participant doesn't necessitate that they are absent from that area. However, participants themselves reported the frogs in past years so in these cases it is more likely that the dry weather this year has contributed to a lower abundance of Leopard Frogs on their sites, as opposed to a lack of ability to correctly identify the species.



Barn Swallow chicks. Photo credit: Ashley Vass

We also received many species at risk reports to our toll-free hotline this year. There were 76 reports for species other than Burrowing Owls, Piping Plovers and Loggerhead Shrikes, which are species targeted by other programs. All but one were species included in the SOS banner program survey with the exception being a sighting of Whooping Cranes flying overhead near Elbow, Saskatchewan. Public reports were received for all 10 species in the SOS banner survey except for Tiger Salamanders and Short-eared Owls. Out of the 76 calls received, more than half were for Monarchs.

SOS staff had the pleasure of visiting with 19 current and 35 potential participants this summer. As a result, we welcomed 26 new participants into the SOS banner program. The newly enrolled sites support a variety of species at risk and several sites had more than one species at risk present. Half of the sites had nesting Barn Swallows, about one quarter had Sprague's Pipits, and there were also occurrences of Short-eared Owls, Ferruginous Hawks, and Bobolinks. The remaining species present included Common Nighthawks, Northern Leopard Frogs, Monarch Butterflies, and even Horned Grebes, Long-billed Curlews, and Great Plains Toads. These new participants, conserving approximately 5,000 acres, bring the total number to 123 landowners and land managers conserving more than 40,000 acres of habitat for species at risk and other Saskatchewan wildlife.

Thank you so much to everyone reporting species at risk. Without you, we would be missing valuable information about the numbers and locations of these species that aid conservation efforts. If you would like more information about the Stewards of Saskatchewan banner program, or would like to report a species at risk sighting, please call 306-780-9832 or 1-800-667-HOOT (4668) toll-free, or email outreach@naturesask.ca.

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HUMAN NATURE



Lacey Weekes

Conservation and Education Manager
Nature Saskatchewan

One of the many beautiful places we have in the province is Greenwater Provincial Park. This Important Bird Area was designated because it was one of two last known areas for breeding Trumpeter Swans in Saskatchewan. In the past, it also had a substantial Great Blue Heron colony. Although the colony has now disappeared, the presence of groups of herons and a fledgling heron along Greenwater Creek, northeast of Greenwater Lake, suggests that a new colony is being established in this area. Greenwater also has a new interpretive centre and the staff are very helpful.

My family and I rented a cabin this summer and had a great time. Our favourite activity was hiking the Marean Lake Birding Interpretive Trail. There is a two-level viewing tower that takes you above the tree line for an amazing view. My five-year-old Surayya and one-year-old Amara were mesmerized by the



many sights and sounds along the way. We saw a Belted Kingfisher fishing in the creek, we heard White-throated sparrows and Black-capped Chickadees, we saw dragonflies sunning themselves on leaves, and we caught Wood Frogs as they jumped across our path. I created a colour scavenger hunt for Surayya. It was her job to collect items along our hike that corresponded to the colours on the sheet. She was kept busy finding purple flowers, green leaves, brown bark, and white butterflies. We also collected different shaped leaves to create a collage by placing the leaves under a paper and colouring overtop to reveal the leaf venations. It brought joy to my heart to see Amara run full force into the lake screaming and splashing. It was mid-June, so the water was quite cold but that didn't seem to bother her. We spent hours playing in the lake and making sand castles on the beach. We also had a small blow-up boat that the kids used to float on the lake. I have such fond memories of the lake as a child that I want to give my kids the same experiences. It is so incredibly important to give our kids opportunities to connect with nature. Even if it's just in your backyard examining ladybugs or watering your garden or looking at the pictures in the clouds. These simple activities can create lasting memories that will hopefully lead to an appreciation for



nature in their adulthood.

Another beautiful place is Ancient Echoes Interpretive Centre in Herschel, Saskatchewan. I was a summer assistant there and lived in the house on top of the hill near the centre. It's where I fell in love with plants. The rolling native prairie hills were covered with wildflowers. I wanted — no, I needed — to learn them all! Herschel is not only a stunningly beautiful place, but it is also full of history. First Nations lived and fought on those hills leaving behind tipi rings, turtle ephigys, vision quest sites, petroglyphs, and bison bones. The coal mine ravine brought miners and hunters alike. The now extinct Plains Grizzly Bear was a main attraction for hunters. There is also an active dig site where three plesiosaurs were found. Sixty-five million years ago, Herschel was covered by a salt water sea. You never know what marine fossil you will come across walking the Coal Mine Ravine.

I hope everyone can get out this winter and visit their own favourite beautiful place. 🐦



Photo credit: Branimir Gjetvaj

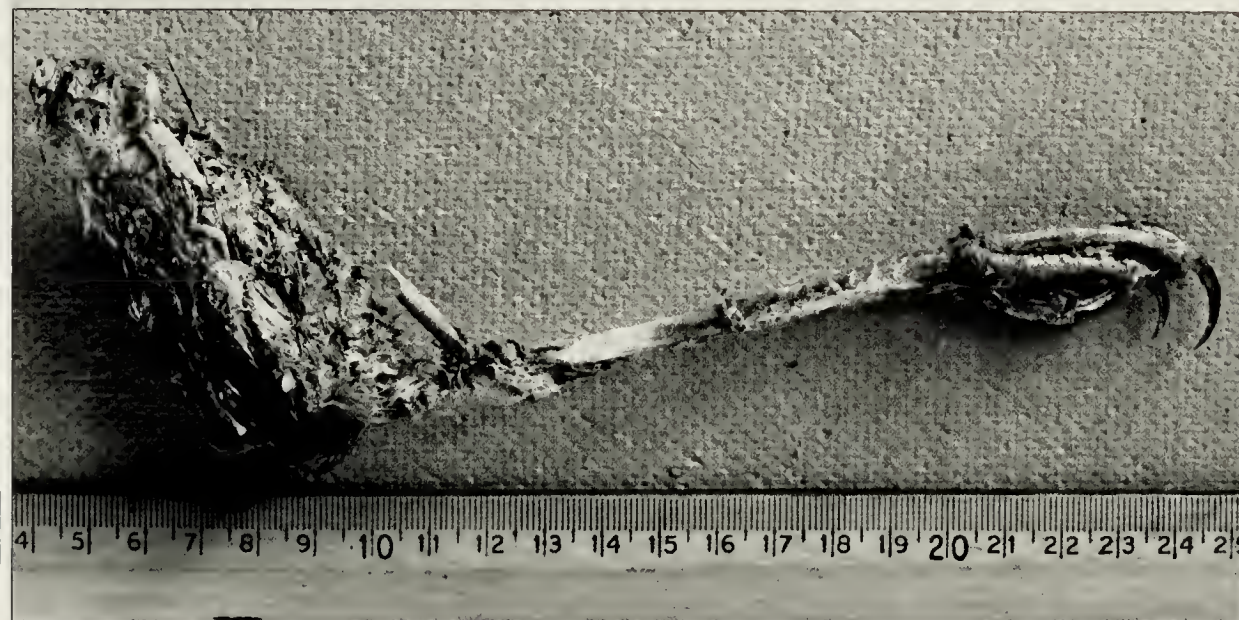


Photo credit: Jack Wilkinson

Mystery Photo Winter 2017 (above)

THE QUESTION IS: Harvey Johnson from Eastend, SK discovered this on a vacant lot partially surrounded by mixed trees in early September. What is shown in this picture, and what likely happened here?

Please send your answers to Blue Jay editor Annie McLeod at bluejay@naturesask.ca or by letter mail: 3017 Hill Ave. Regina, SK S4S 0W2.

Those with correct answers will be entered into a draw for a prize from Nature Saskatchewan.

Mystery Photo Fall 2017 (above)

ANSWER:

The distinctive face shown in the Fall 2017 issue of *Blue Jay* belonged to a Plains Hog-nosed Snake (*Heterodon nasicus*).

The Plains Hog-nosed Snake (formerly known as the Western Hog-nosed Snake) inhabits light or sandy soils in southern parts of the Prairie Provinces. The upturned scale on its snout easily distinguishes it from the Bullsnae and Prairie Rattlesnake. Some individuals exhibit distinctive behavior when threatened, either rolling on their backs with mouth gaping and tongue hanging out as though dead, or rearing up with a flattened neck like a cobra. Although not at all harmful to humans, this snake has specialized teeth in the back of its mouth that deliver mild venom to, and puncture, its common prey, toads.

Have you taken a picture that may make for a good mystery photo? Send it to the editor for possible inclusion in the next issue.



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